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UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE

MAJOR TOPIC IV

FIRE PREVENTION

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Ogden Meeting, 1954
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MAJOR TOPIC IV, Fire Prevention
Sub-topic A

My assignment, as I understand it, is to chart national forest man-caused fire occurrence on broad lines by causes and time periods, so that their magnitude and trends are revealed and then serve as guides for planning the nature and size of attack measures.

On a wall chart, a photostatic copy of which is attached, is shown a breakdown of causes, by regions, by three periods covering seventeen years from 1935-1951 inclusive. While I believe the figures to be statistically correct, in assessing them consideration must be given to significant changes in land areas which occurred in the three eastern regions during those years.

The protection area of R-7 increased from 2,860,000 to 6,690,000 acres; R-8 from 6,066,000 to 14,508,000 acres; R-9 from 4,740,000 to 12,345,000 acres. During that land acquisition period, those regions were continuously placing under administration large blocks of land which until then never had received any organized fire protection. Additionally, a considerable portion of the acquired lands had been misused and denuded to non-productive levels.

The sources of man-caused fires, and the nature of prevention problems, can be broken down into three broad categories:

(1) Fires of industrial or mechanical origin, the elimination of which can be approached by mechanical actions or specific project insulation jobs.

(2) Fires caused by persons whose attitudes are already favorable towards resource conservation, who did not intend to cause a fire, but who now lack the know-how and understanding of risks they create and how to negate those risks. This group is approachable under mass educational efforts accompanied by the restraints of law enforcement.

(3) Fires caused by persons who do not know or have not as yet accepted as valid, the objectives of managing wild land for timber production and resource protection. This group of citizens subdivide into those who are indifferent as to whether the woods burn, and those who operate at deliberate woods burning either on grounds of honest beliefs or because they set personal advantage or gain from a woods fire above the greater losses suffered by the landowner or the community. Prevention of this type of fire primarily involves individual case identification and direct person to person corrective methods.

Under (1) we get the fires from railroad engine exhausts, from right-of-way cleaning; fires from woods sawmill exhausts, burning slab and sawdust piles; fires from power saws, truck and tractor exhausts, and in instances,

fires from blasting of stumps or logging road construction. Coming more into the picture are fires from right-of-way clearing for power lines. Logging slash disposal fires are a serious problem, but inasmuch as some of those fires get away from Forest Service burning crews, they may not all be included statistically as lumbering fires.

Statistically, Railroad fires now occur at a rate of 236 per year or 4.3% of the man-caused fires. Lumbering fires are 189 per year or 3.4% of the Service total of man-caused fires. There no doubt are additional industrial fires hidden under the non-specific category of Miscellaneous.

The man-caused fire chart is in terms of fires per MM acres. Expressed on the basis of total man-caused fires by individual regions, the percentage of Railroad and Lumbering fires and their trend is as follows:

RAILROAD

	R- 1	2	3	4	5	6	7	8	9
1935-1938	11.	11.9	3.0	1.0	5.6	1.9	7.7	2.8	2.3
1948-1951	7.	11.4	2.0	1.6	6.6	2.5	11.8	2.3	5.3

LUMBERING

1935-1938	3.6	5.1	2.1	1.9	2.8	3.5	1.9	3.4	1.4
1948-1951	5.3	4.2	4.8	2.0	6.7	9.5	1.7	1.7	1.6

These figures can serve to focus attention on those locations where these sources of fires warrant special curative efforts.

Under (2) we find significant numbers of fires having their source mainly as unintentional acts of persons friendly towards resource conservation, but who are still in need of the benefits of the broad types of mass education and information, plus the discipline of law enforcement. The following tables (in numbers of fires per year) indicate by regions the size of their problems and the period trends:

Camp Fire

	R- 1	2	3	4	5	6	7	8	9
1935-1938	78	39	77	107	106	186	25	163	119
1948-1951	36	46	76	59	89	119	8	78	41

Smoker

1935-1938	183	80	192	173	427	329	131	736	556
1948-1951	67	81	143	80	345	152	59	550	279

Debris Burning

1935-1938	25	9	12	28	61	55	74	321	800
1948-1951	21	17	14	18	45	22	26	202	133

Miscellaneous

1935-1938	33	21	19	29	193	39	29	114	192
1948-1951	24	35	39	33	202	55	35	173	138

Under (3) is found the source which nationally constitutes the man-caused fire problem of greatest significance. The Incendiary fires, as late as 1952 accounted for 42,440 of the 119,985 man-caused fires occurring on protected forest lands in the United States. Additionally, many of the 25,666 fires classed as Smoker and the 39,527 fires catalogued under Debris Burning and Miscellaneous, resulted from persons who were indifferent as to whether their actions resulted in a wild fire. In other words, near one-half of all fires which occurred on protected lands came from people who had not as yet accepted the objectives of managing and protecting these resources.

All but 346 of the 42,440 incendiary fires in 1952 occurred in the middle and south east and principally in fifteen states. These same areas happen to contain the land which, in the aggregate, has an overwhelming potential for timber production nationally. I suggest that whether this problem is viewed from an overall standpoint, or from a national forest standpoint only, it still looms as one of the greatest of hindrances to the advance of resource management and timber production.

Statistically, fires from this source have been cut in half during the past 15 years on lands for which reliable figures are available. What we are concerned with is how this remaining mass of fires will be reduced, and the speed of reduction which should be planned for.

This problem deals with a major population having generations of ancestors who believed woods burning was beneficial to both the individual and the community. The practice became ingrained, traditional and fixed. Much of the present rural population was indoctrinated in the rightness of woods burning by their parents and matured in that atmosphere.

There are too many ramifications to develop in the time available here, but to partially outline the problem we can say: (a) To the lay observer there are many examples on the ground of occasionally burned areas being more productive of timber than are similar areas from which fire was excluded. (b) The residents believe, and all Forest Service research supports the belief, that livestock in coastal plains areas thrive better on occasionally burned lands. (c) There can be conflicts of land use between tree growers and stock growers. (d) Many residents have not yet accepted either the practicability or necessity for managing timber as a sustained yield crop. (e) A considerable portion of the residents in the fire areas enjoyed little education, have few contacts outside their immediate communities and are not reached by newspapers or radio channels of information. (f) The job involves effecting a complete about-face in public viewpoints, sense of values and interest.

We are dealing today with the high resistance cases, people upon whom posters, slogans, literature and other standard prevention media have little impact. I shall not attempt to develop the details of an effective curative program. I can advance for the consideration of this group and of the Service general staff, the conclusions reached through long and extensive experience of administrators in and out of the Service as to what approaches have been most effective and offer the best promise for the future.

Rather than a generalized approach, each little community, each family, and usually individual members of the family, have to be recognized as separate problems and approached as such.

Extensive cures have been effected. These have occurred where over a period of time, foresters had the available time to become personally acquainted with citizens, could listen to their views and problems and understand them, and then on a man-to-man approach, gradually bring them to an understanding of what land managers were aiming at and could do. As these efforts are repeated, the citizens' observations and thinking are directed to things he had not previously considered. Often the final meeting of minds occurs only after joint observation trips in the woods. The spread between the citizen and forester gradually lessens, and here and there an individual whose judgment the local people respect changes his position and becomes an advocate of protection. It is only after a substantial portion of the local leaders change position on a basis of informed understanding that appreciable progress can be made with the community as a whole.

Law enforcement can be an effective ally. However, law enforcement, by and large, can be only as effective as the general desires of the community. If there is strong community resistance, that will affect the men who compose the juries. State legislatures and judges are activated by local public opinion. U. S. District Attorneys and many Federal Judges handle a court in tune with local views and customs. These facts lead us back to a common point, the creation of a local climate favorable to wild fire exclusion.

The present weakness as I see it is that the Service comes up to the hard core of the problem and then loses momentum of attack. True, the field men whose lives are made difficult by the presence of fires, wedge in attack work whenever they have opportunity. That which frustrates them is lack of time to make attacks in a degree anything near approaching the volume of prevention work they know needs doing.

We have swamped our rangers with ever-increasing time demands in multi-functions. Sub-ranger personnel has been more and more tied down to production quotas for the financing function. Steadily the proportion and totals of time available for prevention work has become less and less. Progress gets side-stepped by playing make-believe that somehow the work will get done on rainy days or by unscheduled contributed time.

I advance the proposition that the stakes involved in creating a resident population favorable to forestry practice (which goes well beyond fire control itself), are so large and vital to the progress of our whole program that we must leave behind the opportunistic intermittent approach inherent to incidental and contributed efforts; that the time is here to recognize and assess the kinds and volume of localized prevention work yet to be done and provide to competent men that amount of time which is required to get on top of this deep-rooted, disrupting and resource destroying limitation. At this point we should bring in the effects of prescribed burning on fire prevention as we have found them. In 1943 when all angles were under consideration preparatory to the Chief's issuance of a policy statement governing the use of fire

as a tool, many individual foresters advanced the fearful idea that burning of the woods by foresters would undermine and break down the fire prevention story.

Speculatively, one then could reason to that assumption. Strong positions against use of fire were taken by individuals,--in some instances activated by reasoning. What later became more clear, in many cases the anti-position was taken and tenaciously held because some men who had preached the gospel of total fire exclusion lacked that certain something required for men to come out publicly and admit they were wrong.

Beginning in Florida in the winter of 1943 with an administrative prescribed burning program of some 90,000 acres, this work was rapidly expanded to include ranger districts in eight states and up to 200,000 acres a year. Despite the fears of adverse prevention effects, there has been a common pattern of reduced fire setting by residents on all those districts.

I have included a chart which relates the previous Incendiary fire incidence to the burning programs of three districts and carries those relationships along by years. As the years passed, Incendiary fire numbers run one-quarter to one-third of what they were prior to this activity.

There are other reasons for the drop in fire incidence than prescribed burning. However, the fact remains that use of fire did not create more wild fires.

On the righthand column of the chart is a Ranger District (Winn) which adjoins two districts on which sizeable burning programs have been effected during all of the past nine years. Due to differences in timber species, only some small experimental burns have been made on the Winn District. The same people live in and around and circulate through those districts. According to speculative theory still prevalent where there is no actual experience to guide, the local folks should have concluded that if it was good for foresters to burn the woods, it was good for any one to do so, and the Winn District should have broken out in a rash of fires.

Actually a population which formerly set dozens of fires a year, rarely does so any more.

Our experience is to the effect that a prescribed burning program properly explained and demonstrated to the local population has proved to be the most effective of all our fire prevention tools. This result can be made easily understandable.

Prior to embarking on a burning program, there is a planned program of informing the people as to just what, why, and how it is being done. The residents are gathered into the school houses and other meeting places and given an explanation and understanding of those conditions under which fire is used. Later, groups of residents are taken over burns, before and after to see just what is being done and the results.

The big pay-off is that when a man learns to read the woods to where he can detect conditions warranting the use of fire, he at the same time learns to identify and rate conditions under which fire results would be harmful. Once men are brought to where they observe and evaluate woods conditions accurately and in detail, they develop personal knowledge and conviction as to when there should be no fire on an area. In brief, rather than the ranger being limited to the tools of generalities, he is armed with an opportunity to educate his residents to a level of informed judgment.

Opposite these favorable results we can offer the experiences where a couple of rangers neglected the job of informing the residents. Yes, the folks did break out with personal fires and that continued until the basic information job was done.

Our experience of gaining public prevention support by way of giving the folks an intelligent understanding of some of the relationships between fire and silviculture has only strengthened our belief that the real key to fire prevention (in the South, at least), is along the road of personal explanations and demonstrations by foresters to residents, of the basic relationships between fire, tree growth, and other resources present. Foresters have an understandable story on which a sound prevention base can be built. That must rest upon a painstaking and convincing woodsmanship education of the many people living within our woods.

MAN-CAUSED FIRES

BY CAUSES- BY PERIODS
PER MILLION ACRES

RAILROAD

	R-1	R-2	R-3	R-4	R-5	R-6	R-7	R-8	R-9	R-1-9
1935—1938	1.58	.66	.41	.09	2.11	.48	11.54	11.87	10.76	1.75
1942—1944	2.37	3.48	.82	.16	3.93	1.07	9.45	11.05	5.88	3.03
1948—1951	.42	1.17	.27	.27	2.16	.38	2.99	5.84	3.97	1.24

CAMP FIRE

1935—1938	2.93	1.84	3.50	3.47	4.38	6.88	8.74	26.86	25.10	5.42
1942—1944	.85	2.24	2.54	1.48	2.10	2.06	3.15	10.05	3.01	2.49
1948—1951	1.25	2.15	3.37	1.79	3.56	4.58	1.27	5.37	3.32	3.01

SMOKER

1935—1938	6.86	3.78	8.73	5.61	17.64	12.17	45.80	121.31	117.30	16.95
1942—1944	2.87	4.02	7.09	3.52	15.19	4.46	13.93	60.88	31.84	11.84
1948—1951	2.33	3.78	6.33	2.43	13.82	5.85	8.82	37.91	22.65	9.29

DEBRIS BURNING

1935—1938	.94	.43	.55	.91	2.52	2.03	25.87	52.91	168.78	8.36
1942—1944	1.03	.35	.27	.45	1.83	.51	8.55	21.43	17.63	3.69
1948—1951	.73	.79	.62	.55	1.80	.86	3.89	13.92	10.82	2.63

INCENDIARY

1935—1938	.19	.09	.28	.26	1.94	1.37	44.06	176.69	106.12	10.93
1942—1944	.07	.09	.14	.13	1.16	.15	6.60	115.12	39.61	11.08
1948—1951	.07	.05	.18	.06	2.04	.15	2.69	77.06	21.51	7.70

LUMBERING

1935—1938	.52	.28	.32	.23	1.11	.89	2.80	14.50	6.54	1.28
1942—1942	.50	.15	.50	.10	.98	.59	.75	2.91	.63	.64
1948—1951	.31	.44	.64	.12	2.26	1.46	.45	2.72	1.17	.99

MISCELLANEOUS

1935—1938	1.24	.99	.86	.94	7.97	1.44	10.14	18.79	40.51	4.03
1942—1944	.85	1.74	1.41	5.00	7.55	1.47	6.90	18.69	12.17	4.24
1948—1951	.83	1.66	1.70	1.02	8.05	2.12	5.23	11.92	8.33	3.85

TOTAL

1935—1938	14.26	8.07	14.65	11.51	37.67	25.26	148.95	422.93	475.11	48.73
1942—1944	8.54	12.07	12.77	10.84	32.74	10.31	49.33	240.13	110.77	36.92
1948—1951	5.94	10.04	13.11	6.24	33.69	15.40	25.34	154.74	71.77	28.71

PRESCRIBED BURNING OPERATIONS AND THEIR IMPACT AS REFLECTED BY LOCAL INCENDIARY FIRE OCCURRENCE TRENDS

	WAKULLA FLA.		CHICKASAWHAY MISS.		ADJOINING RANGER DISTRICTS			
					LEESVILLE LA.		WINN LA.	
	Longleaf - Slash Pine 331.767 Acres Protected		Longleaf - Pine 189,842 Acres Protected		Longleaf - Pine 210.688 Acres Protected		Loblolly - Shortleaf - Pine 336.678 Acres Protected	
	NUMBER INCENDIARY FIRES	ACRES PRESCRIBED BURNED	NUMBER INCENDIARY FIRES	ACRES PRESCRIBED BURNED	NUMBER INCENDIARY FIRES	ACRES PRESCRIBED BURNED	NUMBER INCENDIARY FIRES	
Annual Avg. 1941-1943	27		201		67		10	
1944	32	15,542	136	7,680	57	15,588	0	
1945	1	28,587	167	14,183	117	19,750	2	
1946	12	18,906	342	13,500	32	21,570	0	
1947	8	14,066	319	9,265	59	12,500	4	
1948	6	16,798	67	24,480	45	15,500	0	
1949	2	17,480	86	13,060	9	7,100	0	
1950	4	18,570	178	24,145	19	5,320	1	
1951	4	7,525	166	28,600	22	10,900	0	
1952	8	19,616	54	33,627	22	1,855	1	
1953	0		52		28		0	

MAJOR TOPIC IV: FIRE PREVENTION

Sub-topic "B": "Is fire prevention being given the vigorous and effective attention it deserves?"

M. H. Davis, Assistant Regional Forester, R-3

The Chief's circular, in setting up this topic, states: "Railroad, logging, power and other industrial operations in the forests are having serious impacts on our resources because of the numerous fires they are starting.

"Stipulations in numerous railroad easements are mandatory as to right of way hazard reduction requirements. Timber sale contracts and other instruments contain specific fire prevention stipulations.

"Yet we are not enforcing all of them, or it is an uphill fight to obtain enforcement. What needs to be done?

"There are a large number of incendiary fires occurring annually in the southeast, numerous camper, smoker, debris, and other non-industrial fires occurring annually indicate some members of the public have not learned to be careful with fire.

"What can we do to be more successful in our prevention efforts?"

Regions 1 - 9, inclusive, were circularized and requested to provide data to answer the Chief questions quoted above. Some statistical data requested, was omitted in the replies from two regions.

Chart IV B-1, attached summarizes the man-caused fire data received. It reflects the following:

Cause	1945	1950	1952	Total
Railroad	410	235	157	802
Logging	115	173	200	488

Cause	1945	1950	1952	Total
Power Line	10	29	28	67
Other Industrial	235	245	266	746
Incendiary	1280	1699	1513	4492
TOTALS	2050	2381	2164	6595

It is clear - even with two regions missing in the foregoing tabulation - that incendiarism is the top offender. Let's restate the "score" in order of numbers by causes:

1.	Incendiarism	4492
2.	Railroad	802
3.	Other Industrial	746
4.	Logging	488
5.	Power Line	67
	TOTAL	6595

The purpose of this paper is to report the views of the regions - so here goes!

Question #2. "Please comment with respect to each of the above classes of fire what needs to be done to get on top of the prevention problem. Don't overlook REA."

Answers:

1. Incendiarism:

R-1: No problem and only 3 such fires involved.

R-2: No comment - no fires in this class.

R-3: Of minor importance in R-3.

R-6: No comment - sent copy of fire prevention plan which states "Maliciousness. Those responsible for this class of fires are the lawless element having no regard for personal injuries

or destruction of resources and property. This includes those who will set fires to satisfy a personal grudge or for self-benefits. "Methods of solution: - - -, if the malicious and selfish ones find that they are contending not only with officials responsible for fire control work but also with the vast majority of their neighbors and the people in general who are backing this activity, the objective will be accomplished."

R-7: Incendiary fires are a source of real difficulty because they strike unexpectedly, are persistent drawing heavily on organization and man-power and multiple sets produce difficult suppression problems. The cost of suppression of this type of fire is high in comparison with other fires for the reasons above. Public opinion gives no comfort to the incendiarist. There has been a stiffening of public opinion to the point where there is a demand for adequate action to prevent fires. For example, on one of the states this fall, the Game Commission was severly criticized editorially for not keeping the hunting season closed during this fall's critical fire season. The Commission was in the middle financially for it needs the revenue of hunting, and perhaps with some misgivings as to how well the hunters would back the commission.

Incendiary fires are caused by vindictive persons with real or fancies grudges, by mentally unbalanced persons, and by persons with criminal tendencies in other directions. These have been vigorously investigated with the splendid cooperation of law enforcement agencies, especially FBI. The fact is that a minor number of incendiarists come to trial because of the difficulty of obtaining sufficient evidence to

obtain a conviction. Cases brought to court are effectively disposed of. There is no easy way out for the incendiary problem since there is no known means of preventing these social misfits from carrying out their unsocial activities. Again in 1953 our incendiary fire occurrence was high.

R-8: Comments from R-8 relative "Incendiarism" are too lengthy to quote ver-batim within the time allotted to this paper. Since the R-8 problem is not typical Service-wide but non-the-less is of vital concern to that Region the comment submitted is attached to this paper in the appendix as Exhibit "A". It is commended to you for serious consideration.

R-9: "We have not yet been able to solve the incendiary problem in Missouri."

2. Other Industrial:

R-1: "- - - A lot to do here, including development of better standardized operator plans and more systematic methods for insuring compliance."

R-5: "- - - are problems primarily because new outfits and people are showing up on forest and it is a big job to police. We have the machinery to handle, but shortage of on-the-ground prevention work with users is the big problem."

R-9: "- - - are increasing risks requiring more attention, but they have caused very little trouble so far."

3. Railroad:

R-1: "The R. R. fire problem has not been licked. Drastic reduction in reportable R.R. fires is due largely to change in policy a few years ago placing more responsibility on the R.R.'s (they still have the fires - we don't report them), also to diesel-powered locomotives. We need to keep on the way we are going

(see comments in recent dificiency reports) but push even harder."

R-2: "R.R. fires from locomotives are and will continue to drop off with the rapid shift from steam and diesel equipment. Most of our R.R. fires are from tie burning and efforts are being made throughout the Region to secure better cooperation from R.R. officials and employees."

R-3: 'R.R. fires are not a serious problem in R-3. Diesel locomotives have helped to solve some of this problem.

R-5: "R.R. fires should stay down if the companies continue to do the prevention work laid out for them. Continued pressure the past two years has changed company attitudes and increased hazard reduction work."

R-7: "The statistics above must be interpreted in the light of regional conditions. A casual look at railroad fires would indicate little progress with this risk. This is not in accordance with the facts. In the first place railroads perhaps with one or two exceptions are genuinely interested in preventing fires, and are cooperating to do so. The public relations of railroads insure this attitude. This has not always been the situation. The history being one of court actions in which the railroads have lost consistently when viewed in the long run. Part of last year's difficulty was a let down in fire prevention and hazard reduction by railroads in the wake of a number of easy fire years; the protection agencies sharing the blame on account of not insisting on high standards of performance. This year with a prolonged and severe fire season the number of fires in the region is as in 1952 but the number of railroad fires is 12 or .3 of 1% of the total fires."

R-9: "- - - 1945 was a relatively easy year but the railroads difficulty in getting good coal resulted in an unusually large number of R.R. fires."

4. Logging - Lumbering:

R-1: "Logging fires have increased, but not in proportion to the increase in cut and number of operators. A lot to do here, including development of better standardized operator plans and more systematic methods for insuring compliance."

R-2: "Logging fires are up over 1945 due to curtailment of operations during the war. We hope to reduce the 1952 figures through more rigid enforcement of contract clauses and a more realistic prevention program."

R-3: "Logging fires are always dangerous. We can help solve this problem by:

1. Continue to keep sawdust burners out of the woods.
2. Make smaller operators more aware of fire hazards in all types of equipment including power saws.
3. Enforce a reasonable smoking policy."

R-5: "- -have not changed materially the past 10 years. The companies for the most part are reasonably careful and require care with fire of their employees. Increased mechanization such as power saws, cats, etc. have created new problems, but looks like are getting on top of this. Have ample legal power, but still short desired prevention effort by on-the-ground prevention men."

R-6: "Logging and escaped slash fires have caused a large part of the Region 6 fire damage and fire costs during the past few years. Boards of fire review have helped to indicate what needs to be done to prevent these fires. More thorough equipment and hazards

inspections and adherence to logging closures will do much to prevent logging fires. The enclosed report on escaped slash fires indicates an action program to prevent this class of fire."

Note: Enclosure submitted - F-SUPERVISION-Boards of Review, dated March 3, 1953, "A Report Covering Boards of Review on Escaped Slash Fires in R-6."

R-7: "Unimportant source of fires in the Region."

R-9: "Lumbering fires, while comparatively few, are potentially very dangerous and costly. Closer attention must be given to lumbering operations, especially those on private and State lands."

5. Power Line and REA

R-2: "Both commercial and REA power lines have increased in mileage since 1945. The problem is well recognized and we expect to hold the number of fires from this source to a minimum or probably about three fires per year."

R-3: "Power line fires, especially REA lines, are a matter that needs attention. In R-3 the power line fire can occur during the high wind period. Enforcement of clean-up of hazards currently along power lines will help. REA has caused some Forest officers to feel that they can do as they please in power line construction. They have not been as careful as the larger power companies in the clearing of the rights of way. They also leave the impression that they cannot be forced to do other than what they want to do along this line. The W. O. should deal with REA at that level and agree as to the standards of construction and maintenance requirements that will apply."

R-5: "Power line fires fluctuate over the years. Continued work with companies will handle this. Our "Guide to Hazard Reduction and

Fire Prevention Measures for Power Lines" has been a help."

R-9 "Power lines are increasing risks requiring more attention, but they have caused very little trouble so far."

Question #3:

(a) Do we need additional prevention plan guide lines?

(b) If "yes", Service-wide _____, Region _____, Forest _____, or Ranger District _____?

(c) Are Regional standards with respect to annual prevention plans specific _____? Please attach copy of Regional standards or Manual supplements outlining fire prevention planning standards to your reply.

Answers:

R-1: "- - -needs complete revision of Regional standards for prevention planning."

R-2: "Additional guide lines not needed."

R-3: "Additional guide lines are needed Service-wide."

R-5: "We are always working on new prevention plan guides, at regional, forest and district levels. Regional standards are in process of becoming standardized. So far they are not in the manual. (See report on Fire Control Officers Seminar, 1953, sent to Regional Foresters."

R-6: "Additional not needed. Regional standards are specific. Regional instructions for fire prevention planning were submitted."

R-7: "The region has recently reviewed its prevention standards. Do we need additional prevention plan guides? We feel that the analysis and work plan attack on the problem which has been in effect many years is the most logical and one which has continued

to produce results. The population pressure and increasing use of the forests makes prevention a critical problem. In the past two years and especially this year the cooperation of the public, the state agencies, organizations of many kinds, the press, radio and TV has been most outstanding. Our fire occurrence, while high, yet is remarkable in view of the prolonged high fire danger. The concerted effort at the national level, together with the states and many agencies, plus the indispensible local level prevention effort has produced a remarkable public fire consciousness.

For the first time in the history of three of the forests closure under Federal Regulation was applied this fall. This was successful because public opinion was back of it. Other=wise the high resident population unless sympathetic to it would make a mockery of any attempt of this nature.

There is no thought of making light of the prevention problem in the region. The single factor of reaching the young people in the region who would be risks is within itself one factor which makes prevention both important and a job of considerable magnitude."

R-8: "There possibly may be some prevention guide lines which have been overlooked but we doubt it. The make-up of our man-caused fire problem is pretty well understood as are the curative actions. What needs to be engraved upon the cover of the guide line book is, that it will require men and facilities to effect the jobs."

R-9: "- - -additional guidelines do not appear necessary. Fire prevention planning is outlined in considerable detail in R-9

Manual supplement, copy submitted."

Question #4:

"Is fire prevention adequately recognized in the Chief's "Correlated Standards" organization base? Ranger District _____; Supervisor-Staff _____?

If inadequate, please explain."

Answers:

R-1: "For the item of "General Fire Prevention," the unit measurement for the West is number of schools instead of number of residents or users or some better measures of the volume of business. In the Region 1 area, schools have been consolidated and school busses haul pupils many miles to school. As a result some districts and forests with a considerable general fire prevention load do not have any schools or only one school replacing the many country schools and hence are penalized in insufficient time allowance for such work. Any standard should at least use number of ranchers, miners, railroads, and number of recreationists, especially the hunters and fishermen."

R-2: "Adequate."

R-3: "No" - for two reasons:

1. It is doubtful if the base tie is to the right factors.
2. The Chief's base and the amounts shown on Job Load Analysis is not the same. The Chief's base is tied to work done in the past (Volume of Business) and perhaps the job has never been done as it should."

R-4: "Probably for no function, if we considered as a separate entity, could we say that the work load is adequately recognized in the standards, but for the overall administration of the Forest Service it appears that the standards are as equitable as it was possible to make them. The standards for fire prevention seem to be adequate since the regions are allowed some latitude in preparing their own standards. By doing this it is possible to give more emphasis to specific local prevention problems which has been done in this region when we made our rangers' job load analysis. As we understand it, the Chief's Correlated Standards and Converting Factors are being continually studied and analyzed to improve the base and work out any inequalities.

R-5: 'Our off-hand opinion is that fire prevention is not adequately recognized in the Chief's "Correlated standards", organization base, etc., either at the ranger district or supervisor level. This opinion is not based upon a thorough study, and to postpone an answer of your request until such could be worked out would require undue delay."

R-6: "The time allowed in the Chief's correlated standards for inspection of each operation is ample but the number of such operation on the average Ranger District in Region 6 when multiplied by the time allowance adds up to a workload far in excess of what can be financed. Therefore, we usually end up by doing a substandard job of inspection. Some progress was made last year to get the National Forest timber sale operators to take on some of the equipment inspection work."

R-7: "This region feels that fire prevention is adequately recognized in the Chief's "Correlated Standards."

R-8: The reply is too lengthy to quote within allotted time. It is appended to this paper as "Exhibit B" - The following appears to reflect the Region's objection to the present base:

The Correlated Standards (Page 9 of 1950 issue) compute job time on a diminishing scale. The more man-caused fires per MM acres and the more demanding the problem, the less time allowed per unit of people.

Until correlated Standards and organization base measure the relative human potential to cause fires and the magnitude of the job of changing a human's attitude towards fire, neither

the Standards nor the Base can be expected to be guides to the implementation of the corrective jobs.

Any correlated standards or organization base which is to implement Law Enforcement to a degree commensurate, the work required cannot be calculated on arbitrary figures. It just is not that simple. To whip the problems there can be no short cuts, or avoiding the identification and measuring of the work actually involved in overcoming an incendiary.

R-9: "We are not in a position to suggest a way for the Chief to give more adequate recognition to fire prevention."

Question #5 -

"Is there need in each fire region for a regional fire prevention officer (including law enforcement) to head up and give emphasis to the man-caused fire problem? If "yes", present brief statement of need and proposed use for such a position."

Answers:

R-1: "Yes. To keep the field continually alive to prevention and law enforcement problems. Should be a trainer as well as a law enforcement expert. Needs to take active part in only the most important cases; otherwise inspects and trains rangers and staffmen."

R-2: "Such man not necessary in R-2."

R-3: "No - if Region is adequately staffed. A training man is one who could also handle prevention and law enforcement activities."

R-4: "We do not feel there is a need for a regional fire prevention officer as a separate position in this region. If we did create such a position it would tend to centralize the responsibility which is now shared by all of our rangers and other forest

personnel. Fire prevention is largely a PR job and the Division of I&E can carry the primary responsibility with the help and advice of personnel from the Division of Fire Control.

We are particularly interested in the betterment of our law enforcement practices but in lieu of having a special regional fire prevention officer assigned law enforcement responsibilities, we believe that special training should be given to a few key employees from the R.O. and forests on law enforcement techniques and the principles of sound investigation. By scheduling special regional law enforcement schools, by authorizing attendance at zone schools such as those held periodically at Missoula, by under-study training on specific trespass cases, and by assignment of definite responsibilities for investigations, we can improve our law enforcement record without the addition of another position in the R.O. base."

R-5: "We cannot speak for each region, but we are very definite in our feeling that not less than one or two regional fire prevention officers are needed in Region 5. For the past year we have had three such men primarily on law enforcement only. Our law enforcement program has collected an average of nearly $1 million a year for the past 10 years. These men have worked primarily on the law enforcement phase of prevention of man-caused fires.

We feel there is much that can be done in over-all prevention work if we had a man to spend sufficient time on the project. If we were able to keep our number of man-caused fires from increasing in this Region, we would be doing a good job because the risk keeps climbing every year. The population of

California increases at the rate of 40,000 people per month. There is a corresponding impact upon the national forests. During the past two years, we have had a downward increase in man-caused fires due, in part at least, to increased emphasis of on-the-ground prevention by our forests as well as the overall educational prevention program."

R-6: "There is a big job in this region at present on fire settlement cases involving trespass and claims totaling 3 to 4 million dollars. The job promises to get larger due to the increased value of timber, increased cutting, and more insurance business on logs in the woods. We can expect insurance companies in particular to aggressively prosecute claims and fight fire trespasses in which they are involved. It appears reasonable to suppose that a qualified person to help prepare and follow through on the larger trespass cases and to investigate claims and prepare counter claims would 'pay off'."

R-7: "This region does not consider a regional fire prevention officer essential at this time. A regional law officer was employed with excellent results in the period of the expansion of the forests which occurred 1934 - 1939. We continue to receive much assistance from the Department's Regional Attorney and his assistants. The fact that his office and ours have been in the same building has meant much to us. Separation could change our problem so far as trespass is concerned."

R-8: "Whether or not each Region needs a Regional fire prevention -- law enforcement officer could be answered only by an analysis

of each Region's man-caused fire problems."

"Fire Prevention-Law Enforcement specialists are a crying need. We believe their numbers and locations should be in proportion to the numbers and locations of man-caused fires, after breaking the numbers down into causes, and weighing each cause on the basis of the job posed by a fire of each given cause."

R-9: "Yes, there is need for a Regional Fire Prevention Officer. There is also need for a Regional Fire Training Officer, for more Fire Research Workers, for more FM radios and fire equipment, for giving seasonal fire control men longer employment, etc. There is need for more funds for many things. A regional fire prevention and law enforcement officer would rate high priority, at least until our incendiary problem is licked."

Question #6

"Do we make effective use of cooperation from other law enforcement agencies such as state police, sheriff's offices, highway patrol, and others? If answer is "no", please comment - suggest solution."

Answers:

R-1: "Degree of cooperation varies between forests. Some very good, others negligible. A regional fire prevention officer could do much to improve the weak spots."

R-2: "Full use is made in R-2 of other agencies and all law enforcement officers."

R-3: "No. Believe we could do more to correlate their activities with the Forest Fire Organization."

R-4: "As a result of the Clarke-McNary Section Two Program we have given more emphasis to securing cooperation from local and state law enforcement officers. We are favorably impressed with the local efforts being taken by our field officers. In a number of trespass cases, the State and County officials have assumed the major responsibility for law enforcement action and relieved us of considerable detail work. We have also found that the FBI has been especially cooperative. We have hesitated calling on them and possibly in some cases should have invited them in earlier.

In dealing with local law enforcement agencies, it often develops that action is not as prompt or effective as we might desire, but the results obtained by building up good will and further cooperation more than offset any disadvantages we have sustained."

R-5: "Yes. We have received excellent cooperation from various types of law enforcement agencies throughout the State."

R-6: "Reasonably good."

R-7: "An immense increase has occured in the number of law enforcement officials in the state game departments. In some of the states they are known as conservation officers who make fire law enforcement a part of their work. The region in working with the various law enforcement agencies feels that the initiative must be maintained by the field personnel of the Service and that the primary responsibility for law enforcement lies with the responsible land manager."

R-8: "Yes, to the extent the men of those other agencies can momentarily find time from their regular or other demanding commitments to participate in fire law enforcement."

R-9: "We do not make as effective use of law enforcement agencies as we could. Neither do we make as effective use of other agencies, organizations and individuals in our fire prevention and presuppression plans as possible. I believe we have gone about as far in trying to make use of law enforcement agencies as in other fields. We go as far as it seems feasible and possible with the limited time available to pursue this and other kinds of aid and assistances."

Question #7

"Suggestions - comments appropriate to topic."

Answers:

R-1: "Generally, we need to re-emphasize the priority of fire prevention, provide the ranger with necessary means to get the job done, train and inspect to see that it is done and not allowed to be shoved aside by other "must" jobs that appear to be more pressing at the time."

R-2: "In Colorado and South Dakota where the CM-2 program is well organized the prevention work is handled by the Forest Service and the State Foresters working in cooperation with each other. This has proved effective and results in complete coverage of both states."

R-4: "At the Western Regions Fire Meeting held at San Francisco, California, in January, 1952, some specific conference recommendations were made concerning the prevention of industrial fires on national forest timber sales and other activities and on private operations of various kinds within the forest. The recommendations made at this San Francisco conference are sound and should

be reconsidered at the 1954 meeting."

R-5: "The direction set in California Region during the past two years is to give more vigorous and effective attention to fire prevention. We set up test projects on several forests where we took men from their regular-financed suppression crew positions and used these funds for additional fire prevention personnel. Indications thus far are that we can go even further in this respect."

R-7: "The overall resource management program of ths region depends on an effective fire control job. From the manpower point of view, fire control could create such a drain on the region's manpower that nothing would be left for other resource management work.

The key to the fire jobload is prevention. In this region where other than man-caused fires are insignificant, fire prevention becomes of great significance. Public education, national fire prevention programs, and the wider interest and influence of many conservation forces have softened the fire problem. But fire prevention in its final analysis must be dealt with as a local land management problem. Since it is a key to management, force must be concentrated on any unusual problem even if in so doing other management activities receive less attention.

A technique for fire prevention effort is described in January 1952 Fire Control Notes which has proven effective in areas of dense population and high fire occurrence. Should a fire occurrence problem develop in any area, there is no substitute for

concentrating effort upon the problem until it is brought under control. A plan similar to or a modification of it to meet the local situation should be effective in meeting any problem of the future."

R-8: "To those who have not had the experiences incident to a near lifetime of working at timber growing in the midst of a population traditionally indoctrinated in the necessity and rightness of woods burning, it is well nigh impossible to convey by word an understandable picture of the nature and scope of the problems involved. It is still more difficult to sell the makeup of the most promising lines of attack and what their implementation requires.

Fire prevention down here, or, causing an about face of a public concept involves many of the elements which would be common in getting people to change their religion or political party affiliation.

Remarkable progress has been made, mostly done the hard way. The rate of future progress is subject to administrative decision. Effective decision will have to be; that there exists a huge collection of particular jobs to be done; that accomplishment will have to be approached in the same manner as would the construction of a road or a building; that men and facilities must be made available and on a schedule which relates quantities of work to time."

R-9: "It is always possible to devise ways and means of doing a job more effectively. We believe more effective signs and posters

could be devised for use by us in cooperation with States and 'Keep Green' committees."

This presentation substantially consists of a reporting job. It is apparent that much needs to be done. As is the case with the whole subject of fire protection the lack of funds and personnel for more effective ACTION is a real factor.

Nonetheless, we can roll up our sleeves and strike hard at more effective "grass roots" prevention effort! Let's be honest and say that we can do more and must do it to even hold our present status!

My personal thanks to all regions and individuals who have so graciously given me their cooperation under trying circumstances. I am mindful of present demands on your time. Please do accept my sincere "thanks"!

APPENDIX

EXHIBIT "A" (From Region 8 memorandum 1/5/54)

Fought by National Forests	1945	1950	1952
a. Smokers	437	547	796
b. Debris Burning	150	203	259
c. Miscellaneous	165	176	230
	752	926	1285

Fought by States on protected private lands within R-8:

	1950	1952
Railroad	1,880	1,446
Campers	1,873	2,936
Smokers	9,903	13,786
Debris Burning	11,925	15,476
Incendiary	35,544	36,352
Lumbering	1,194	2,230
Miscellaneous	7,494	7,977
	70,282	81,348

It so happens that 1952 was one of the most severe and exceptionally dry fire years of record.

Without a picture of all the principal classes of man-caused fires on the national forests, and of what is going on in the areas within which our scattered national forest areas are located, one can hardly grasp the situation.

There follows a quote from a letter written to J. S. Barrows which was meant to help focus the fact that progress in Fire Prevention is a product of men and facilities:

> The gist of Major Topic No. I is "taking stock of facilities needed for Fire Control."
>
> Western experienced men almost universally translate the term Fire Control into suppression and presuppression. The Task Force under Topic I will take stock of the manpower and facilities

available and needed for suppression and presuppression.

The agenda is silent as to measuring the needs of prevention facilities against the prevention jobs yet to be done. R-8 national forests experience about 45% of all the man-caused fires in the Service. On the surrounding protected private lands, there were 80,203 man-caused fires in 1952.

These brief figures may explain in part why from our viewpoint the needs for fire protection cannot be properly or adequately assessed until the needs of fire prevention are recognized and included.

Fire prevention is treated under Major Topic IV, but primarily in the vein of physical hazard reductions and statistics. That has its place. However, and it is a big however, Fire Control in these United States never will mature until the nature of the major fire prevention jobs is recognized, and men and facilities become available in strength commensurate with the size and nature of the undone jobs.

We put in a plug for this lower one-third of fire control because while we do not low rate the value of the traditional acts of publicity, lectures, posters, etc. on incidental time, we down here have learned long since that the big end of fire prevention, reeducating a major population away from traditional woods burning and into acceptance of land management and protection, is not an incidental job. It is a job requiring a number of particularly able, highly trained and specialized men working on a sustained program yearlong and year after year.

As long as man-caused fires continue to be the greatest single source of resource losses, we would like to see Fire Prevention accepted as a substantial member of the family whenever the needs of terms of men and facilities for fire control are being assessed.

Only a minor portion of fire prevention in the South has to do with the mechanical reduction of risks; that is, railroads, logging and industrial.

The real prevention problem is one of effecting a complete about face in the beliefs and mental attitudes of an immense rural population which traditionally, and for many generations, believed the woods should be burned regularly and who worked at burning as a civic duty. Several large volumes would be required to trace out the many seemingly logical reasons behind the development of this practice and the depth of its roots. Sufficient for this occasion is to accept the fact that woods burning has been second nature and standard practice on the part of hundreds of thousands of people.

No one familiar with the facts expected a rapid change. At the best, many years of intensive effort are involved. While present day figures show startling volume, actually tremendous progress has been made. The numbers of man-caused fires today are less than 25% of the number of fires occurring on the same lands twenty years ago. The Forest Service can claim only a fraction of the credit for the progress. The Service organization has labored long and hard and supplied a good part of the leadership, but many other organizations such as State Foresters, S.C.S., and

civic groups have worked equally as hard. The principal public leaders have become increasingly active on our side, editors, bankers, industrialists, educators, etc. The change has been great among city and town residents. The trend is good among rural residents.

The big question is one of rate of progress, or the length of time which will yet be required to bring the rural public attitude to where numbers of man-caused fires will be reasonable in relation to the economics of the area.

On the national forests of R-8 the change can be rapid or slow. We are quite aware that the attitude of a general population within which a ranger district is located sets a limit to the rate of prevention progress which can be expected on the district. Large rural populations live within all our forests.

At the same time we have established by repeated experiences that given able manpower to work full time on the really effective approaches, ranger districts with notorious histories of incendiarism and fire carelessness can be tamed. That has been well demonstrated.

The key to progress is a forester passing through the gate repeatedly of each of the several hundred to the several thousands of homes located within a district and selling the story man to man.

On these intensely managed high producing districts, the ranger is swamped what with his sales, silvicultural work and the many other must duties. His helpers are financed from project funds, cooperative TSI, 030, Roads, etc. They all do some prevention work, but physically

the time does not exist in which to attack the great load of prevention work needing to be done.

If we maintain the position of "let the ranger hit a lick now and then and wedge in what he can", we will progress a little, but we will pay through the nose a hundred fold in unnecessarily lost resources and continuing large suppression costs. Or, reduction of the fire drain on resources can be rather rapid. The speed of progress will be the product of how many men will be financed to work full time at little but a sustained prevention program in the hotter areas.

Twelve carefully selected and well trained men, GS-7 caliber or better, could produce startling results and savings, working directly both educationally and as law enforcement specialists. The public mind is awakening. It is subject to being given direction. In the south, the difference between the basic cause of fires called Smoker, Miscellaneous or Incendiary, is an almost indistinguishable line. The true causes of these fires are that the public mind has not been sufficiently weaned from the "open range" view (any unfenced land if for any citizen to do as he pleases on); and, large segments of the public mind does not yet understand, accept or value resource management actions on "wild lands."

EXHIBIT "B" (From Region 8 memorandum 1/5/54)

Fire prevention is recognized in the correlated standards and organization base, catechistically and subjectively. The component jobs have not yet been recognized on a basis of measured evaluation.

The apparent flaw is that the jobs have been averaged nationally rather than being correlated or weighted to fit their specific local nature.

During the early and experimental days of scientific planning, some kind of standards and guides were necessary. Creation of nationwide subject factors were good expedients for getting under way. Progress towards refinement and accuracy of measures of manpower and facilities required to execute the many jobs would seem to demand that the temporary or nationally averaged standards be replaced as rapidly as possible. Sound replacements can evolve only as products of analysis and evaluation of the nature and magnitude of work needed to accomplish each job as that job actually is in any one locality.

A considerable assortment of examples can be pointed out whereby widely applied generalized standards equally as widely miss and distort the answer as to what is required to effect a given job in a given locality.

A couple of such examples may help indicate how the measures of Fire Prevention jobs rest on false premises.

One factor used in the Base is the number of persons in units of 1,000 residing in the immediate area. The assumption is that in any one zone people are about alike in education, attitudes and actions. That

assumption is qualified by a sliding scale of number of man-caused fires per MM acres.

It happens that from a fire-causing standpoint people are vastly different. Five hundred people in Southern Mississippi or the coast of South Carolina will in fact cause many more fires than would 100,000 residents of forests in New England and various other locations.

The prevention job is set largely by the relative fire-causing potential of the individuals in each locality. These potentials must be clarified and included in any standards which can be said to measure the curative jobs.

The correlated standards (page 9 of 1950 issue) compute job time on a diminishing scale. The more man-caused fires per MM acres and the more demanding the problem, the less time allowed per unit of people.

On a district having 50 man-caused fires per year, the Ranger is allowed 1.5 per 1,000 residents. On the then 2-District Francis Marion, with an annual average of 676 man-caused fires, the allowance for prevention is 2.3 per 1,000 residents. Statistically, the job on the Francis Marion is thirteen times tougher. Actually, the requirements for converting a confirmed incendiary is vastly more demanding than correcting a person who did not want to cause a fire but was careless in watering out his camp fire.

Until correlated standards and organization base measure the relative human potential to cause fires and the magnitude of the jobs of changing a human's attitude towards fire, neither the standards nor the base can be expected to be guides to the implementation of the corrective jobs.

The other example I will advance is the job of Law Enforcement. That involves the investigation of each fire cause, -- seldom obtainable from clues at the scene, but obtainable only from other humans with whom the Ranger is well enough acquainted to get them to talk. It also includes working up evidence in a form and with legal accuracy and completeness which will hold up in court.

If a Ranger has 50 man-caused fires, he is allowed 5.0 per fire. If he has 300 man-caused fires he is allowed only 2.0 per fire. Hence, the more violent and deepseated the problem, time available per violation is diminished. Actually, and to make progress, the allowance per case should be ascending.

This is further distorted in incendiary areas. Securing evidence which will convict an incendiary is immeasurably tougher than the conviction of a camper or a railroad. We note that a team of F.B.I. agents will work a full week on rather good fire clues, and still miss out on a good proportion of their attempts.

Of the 676 man-caused fires per MM acres referred to on the Francis Marion, 556 fires per MM acres are incendiary and planned by people who still believe the woods should burn.

Any correlated standards or organization base which is to implement Law Enforcement to a degree commensurate, the work required cannot be calculated on arbitrary figures. It just is not that simple. To whip the problems there can be no short cuts, or avoiding the identification and measuring of the work actually involved in overcoming an incendiary.

NUMBER OF MAN-CAUSED FIRES

(Except R's 4 & 7)

CAUSE	R - 1			R - 2			R - 3			R - 5			R - 6			R - 8			R - 9			Total		
	'45	'50	'52	'45	'50	'52	'45	'50	'52	'45	'50	'52	'45	'50	'52	'45	'50	'52	'45	'50	'52	'45	'50	'52
a. Railroad	89	4	37	39	43	18	1	4	0	67	63	23	25	5	11	89	94	33	100	22	35	410	235	157
b. Logging - Lumbering	19	7	14	5	14	14	11	17	10	44	54	41	24	38	57	8	31	51	4	12	13	115	173	200
c. Power Line	1	2	5	1	2	3	0	4	1	8	13	13	-	4	2	-	4	4	-	-	-	10	29	28
d. Other Industrial	4	5	1	-	-	-	0	0	0	213	219	227	18	21	38	-	-	-	-	-	-	235	245	266
e. Incendiary	3	2	1	-	-	-	4	1	0	45	50	25	5	1	5	964	1393	1201	259	252	281	1280	1699	1513
Totals	116	20	58	45	59	35	16	26	11	377	399	329	72	69	113	1061	1522	1289	363	286	329	2050	2381	2164
	194			139			53			1105			254			3872			978			6595		

Subtopic IV B "Is Fire Prevention Being Given the Vigorous and Effective Attention it Deserves."

1. Number of man-caused fires in the classifications listed and for the years indicated.

	1945	1950	1952
a. Railroad	1	1	0
b. Logging	0	3	5
c. Power line	-	1	-
d. Other industrial	1	1	1
e. Incendiary	1	2	3
Totals	3	8	9

2. Brief comments on <u>each</u> of the above <u>classes</u> of fires.

a. <u>Railroad</u> - This is a problem. Even though the annual number of fires is small, it is a continuing threat because some of our most expensive fires were caused by railroads. Since right-of-ways are usually in the canyon bottoms, fires that originate on or near the right of way can and do sweep up the steep slopes rapidly. Considerable progress has been made in contact with representatives of the companies but we still have a big selling job to do. During critical periods the companies are using diesels and requiring their maintenance crews to fight fires whenever they occur. On the minor fire cases, we have had no difficulty in securing repayment of suppression costs. The prevention job is a joint one since much of the areas adjacent to the right of ways is S&P land. We are working closely with the State Foresters in all our prevention contacts.

b. <u>Logging</u> - Logging operators are probably our best fire cooperators and even though the trend as shown by the table above shows an increase, this is largely due to a much greater activity by the lumbering industry. We are requiring that fire prevention and presuppression plans be consummated for the major sales and followed through by close inspections of company and forest officers.

c. <u>Power Line</u> - This is a minor problem and one which we feel can be controlled when the special use permits are issued. Power line clearing and cleanup has been adequately controlled. We have had excellent cooperation from the utility companies. They have some weak spots, in their maintenance crews especially, that will take continued effort to correct.

d. <u>Other Industrial</u> - This is one of our major problems because of the nature of the industries. During the past few years two major fires have occurred from mining operations. One involved a federal lawsuit which we lost. The major cause is from machinery use. We need stronger legislation concerning spark arrestors and also to secure better evidence on which to build our cases. We are working on this and eventually should get results.

e. Incendiary - This is a minor problem and usually associated with stockmen fires burning off range lands. Considerable progress has been made by working with the State Foresters. Wider dissemination of information concerning closed seasons, more inspections when burning permits are issued, and better follow-up is helping. Through local education programs this problem should be considerably reduced. We have a responsibility to show people how fire can be used as a tool of management.

3. Do we need additional prevention guide lines?

We feel that present prevention guide lines are adequate. We prefer the local approach and feel that we can handle the situation by working at the regional, forest and district levels. We have the tools. The job is to keep working and learn how to use them to the best advantage.

F
SUPERVISION
Meetings (Ogden Fire Control Conference, 1954)

MAJOR TOPIC NUMBER IV - FIRE PREVENTION

Sub-Topic C - Education Efforts

By

George S. James - Region 5

"Fire Prevention and Keep Green Programs are a part of the whole conservation movement. (1) Should the educational program be expanded to include the use of fire as a tool of management and if so, how? (2) Also related is the consideration of public education in the field of conservation designed to acquaint them with the resource situation as it relates to fire control which will make it possible for them to intelligently weigh the need for adequate funds to care for the public's forest properties."

After studying all of the replies received from Regions 1 to 10 we found recommendations varying from "yes" to "no" with all degrees between. Yet, there was a consistent thread which needs attention. The thought involved encroaches on sub-topic B because of the nature of the problem. It is a grouping of situations and classes of people, i.e. those groups engaged in some form of land use planning and fibre production.

I particularly liked the statement from Region 7 - "Regions having large land problems, employing fire as a tool, are on notice that fire prevention should discriminate between wild fire and the employment of fire as a tool in management." It sets forth a fundamental guideline to which we should religiously adhere. Region 8, with experience over a large number of years, has the following to say - "The use of fire is a particularly delicate and tricky

idea to present to the general public which has listened to years of total fire exclusion propaganda. Consider the situation among professional foresters themselves. A large number of foresters simply close their eyes and blindly resist the use of fire, either because they never have made the effort to inform themselves or because they are activated by sentimental inhibitions picked up during their period of professional adolescence. With foresters scattered and divergent, taking extreme positions, how can anyone expect other than confusion and misunderstanding among laymen should there be any publicity for publicity's sake on the use of fire."

Region 4 sums it up quite objectively in the following quotation. - "Since the national fire prevention education program is geared to reach a great number of people in all classes, ages, and interests, it probably must be restricted to the more popular and general phases of fire prevention without any mention of controversial or technical aspects. For this reason we do not believe that the national education program should be expanded to include the use of fire as a tool of management. <u>There is a need, however,</u> for improved local explanation and dissemination of information on the ecological effects of planned burning - - - - -. There are certain technical aspects in the use of fire, as a management tool, that require close contacts and patient detailed explanation. For example, there must be a full understanding of the adverse effects of burning such as erosion on steep slopes, the fact that burning often stimulates the encroachment of rabbit brush and horse brush in these western areas, that decreases in organic matter often results, etc. The fact that range conservationists and research personnel are very careful in advocating the use of fire as a management tool indicates that we in fire control must also proceed with care. We cannot, however, avoid discussing results of burning with people

because they now get information on the subject from a variety of sources. It is necessary that we know our local situation in detail so as to give sound and authentic advice."

Now to quote from a recent R-5 report. - "The brushlands of California have for many years been the source of many difficult land management problems - - - - -. Livestock producers faced with an immediate need for increased forage have looked toward brushlands as a possible source if the brush could be removed and replaced with grass or other plants suitable for livestock grazing. Fire has been used extensively in California by livestock growers to try and extend the boundaries of available grazing lands.

"National Forest administrators charged with the responsibility of managing the upper, rough mountainous watersheds for the multiple uses of water, timber, forage, wildlife and recreation have looked at brush-fields in terms of their long-time function in meeting demands for these uses. Because experience has shown that - - - - - (certain) losses (accrue) - - - - -, public land administrators have urged caution in the use of fire and have sought to protect all watershed resources from uncontrolled fire.

"Nevertheless Forest Service policy has long recognized the controlled use of fire as a management tool under appropriate conditions when carried out in accordance with a pre-determined plan. The Forest Service realizes that under certain favorable conditions, the removal of brush and the reseeding of the land to range grasses will increase forage production. Fire properly controlled or used in combination with mechanical or chemical treatment can serve as a useful tool in brushland conversion - - - - -."

Where fire is used, what classes of people have received actual or so-called economic benefit? The first large and extensive program was to carve farms out of the then tree-covered land. Following that period, large areas of wildland - not suited for agriculture - were burned to get grass for livestock where woody plants or reproduction came in. Then, as logging went through the country, clear-cut areas were burned to eliminate slash and debris in order to protect adjacent virgin stands. In the west, brush covered slopes were burned to obtain succulent sprouts for deer and elk. And, in some isolated sections, before the local Indians were gainfully employed, hillsides were burned to produce a fibrous grass necessary to basket weaving. These were the main reasons for using fire.

More recently, the controlled use of fire has been for the following general purposes. (1) burning of clear-cut logged-over areas to eliminate fire hazard and to prepare adequate seed beds for either natural regeneration or planting new stock, (2) disposal of logging debris previously piled, (3) ribes control in white pine stands, (4) further clean-up of single wild fire burns in white pine, fir, and hemlock, along with snage, (5) stand improvement to kill encroaching douglas fir in white and ponderosa pine types, (6) burning brush slopes and preparation of seed beds for broadcast grass seeding, and (7) in some rare instances for alleged increased water production.

Results, over many years, indicate that education has been helpful. The number of promiscuous fires started for land-clearing, etc., is going down. Pre-planning and more adequate control have been substituted. By and large, the Forest Service has taken the hard way in getting into the scheme of things. In fact, we were forced into it. Therefore, let's pool our thinking in order to have a better educational program, region by region; at least one which will be accepted by

the primary interests as well as the general public. Fire control people should assist in getting good practices, and, to properly interpret results to the man on the street.

In California, our most promising results have been obtained thru a pilot type project initiated on the Mendocino Forest some years ago. Our problem was to get on top of many large and costly incendiary fires set by local people to supposedly increase livestock and deer forage and browse. Up to that time we too believed that all of the brush slopes in that area had been covered with timber; and that fires, down thru the years, had altered the type. We started small brush clearing projects, using controlled fire where damage to the watershed could be minimized. We urged local people to cooperate. They did, and incendiary fires started to go down. Not all conversion projects were successful. Grass did not survive even though seed beds were prepared. In order to get information on the lack of success, we started an intensive soil vegetation survey in cooperation with various statewide agencies. We learned that most of the chamise covered slopes would not support grass or tree growth, - in fact they probably never supported anything but chamise brush. Where soils indicated that grass could be grown, the areas are outlined and fire is used as one of the tools in preparing the site. The degree of slope, along with the erosive characteristics of the soil, are taken into consideration in order that a minimum of damage occur to the watershed.

We had a topic for discussion more readily understood by the class of people who lived in and adjacent to that general area. We were talking of the wildland soils and their capabilities for producing crops -the same kind of talk carried on by other agricultural agencies and farmers in determining what could be done on

cultivated lands. Incendiary fires in that National Forest have been all but eliminated.

There is support for extending the intensive soil vegetation survey into adjacent counties, both on private and public wildlands. Other organizations, such as Farm Bureau, Soil Conservation Service, Extension Service, Department of Fish and Game, the University of California, the Division of Forestry, etc. support it, extending the survey throughout many areas of the State. The Division of Forestry and the University of California have primary responsibility on state and private lands. The Mendocino type conversion project has become so well known, that livestock interests, fish and game people, etc. are talking to the point of wildland capability, costs involved and potential damage to watersheds.

Other regions have similar experiences. We urge Firo Control people to become interested in intensive soil vegetation surveys and to help in extension type work with the classes of people who are principally involved.

Region 6 raised a pertinent point: - "We in this region feel that there is a - - - - - place and need for public education, etc. Each year we are burning vast areas of clear-cut slash which results from logging on the west-side forests of Oregon and Washington. This job sometimes exceeds the acreage burned in wildfires by a considerable margin. At times we are burning slash and fighting fires simultaneously on the same forest and even on the same ranger district. Under adverse conditions those slash fires sometimes escape and do large amounts of damage. The public rightfully raises the question - why, why do you set fire to the woods after all the effort put forth in protecting them during the summer season? We need to give them the facts so they can understand our action."

We must do a much more intensive planning, preparedness and control job so that escapes never occur. We can't explain an escape any more logically to the general public, which would be accepted without reservation, than we may condone the escape of any so-called controlled fire.

On the other hand, as long as the prescribed burn is under control, there should be ways of interpreting the good which will come from it, depending upon original objectives of good land use planning. But here again, it isn't a subject for nationwide education. It should be geared to the local situation and carried accordingly. Certainly public education, using fundamental approaches, such as soil capabilities, the need for hazard reduction and getting the land into production at the least costly method of doing so, without damage to the watershed, will be understood. It is the wildfire, the promiscuous burning, which still must be prevented through mass education.

Therefore, it is suggested that the use of fire as a tool of management not be included in a nationwide educational program. However, in lieu of it, we believe that regions or sections of the country should carry programs along the line of intensive soil vegetation inventories and capabilities in order to develop a common understanding and closer working relationship with those groups which may still sponsor burning without having any idea of the end result. Slope and aspect, along with erosion potential should be included.

In your opinion, I may have dwelt overly-long on this phase of the subject. I have done this on purpose, because I believe in the fundamental concept that as each decade passes, our program must become more intense and in greater detail in order to continue making measurable progress. The field of mountain soils seems to have more promise than a broad nebulous sort of thing because we can get our hands on it and work it out accordingly.

Now to pass on to the second phase, i.e. - "Also related is the consideration of public education in the field of conservation designed to acqaint them with the resource situation as it relates to fire control which will make it possible for them to intelligently weigh the need for adequate funds to care for the public's forest properties."

Many people, over a long period of time have made suggestions and caused to be put into effect, many, many vehicles and opportunities to acquaint the public in the field of conservation. Innumerable organizations made up of private bodies and government agencies at local, state and national levels are involved in the program. The concensus of regional replies is to the effect that progress is being made in the field of generalized education, but that it does not penetrate effectively by itself. The broad program and media used will continue to bring along the masses of people. However, when it comes to support action, it is still necessary to reach down and come up with sufficient, well received basic facts, fundamentally understood, which will lead to action where it counts, by working on a man-to-man basis with individuals and groups and especially those who have some tie-in with the multiple use program.

Mass education, generally speaking, should continue to be designed around sentimental aspects. But to get down to the local level, area by area, it is still necessary that we work with and thru economic groups. There are many stories of success in this field, but for some reason, we haven't been able to carry it as fully as we should. If we take each specific local situation, the people and their economic pursuits, and then work it out, I am sure that we can go ahead much faster.

Also, let's cut out the stilted, technical terminology, and get down to the every day, common use of words if we expect any degree of success. And remember - there's extreme competition for people's attention, time and support - so let's get to the point in an efficient manner.

There is a woeful lack of support from certain segments of our user groups. I will mention a specific group. The lumbering industry is depending more and more on National Forest timber. Sure, we have our problems when it comes to certain phases in timber management, yet, on the other hand, there are recognized areas of agreement, and in one in particular - fire prevention. Somewhere along the line, this phase must be broken out in order to get positive support in developing the greater working capacity needed for prevention and preparedness. Here is something tangible on which we can work. I don't know the answer in an off-hand sort of way. I suggest that at the forthcoming meeting of Regional Foresters and Directors - this specific phase be brought up for discussion and eventual action in order that we may have a reasonably satisfied group of customers in the lumbering industry who will support the where-with-all for an adequate fire organization.

One region came up with a thought which was totally new to me - let me quote it. - "So far as we know, we have never had Chief's approval of a regional fire plan. If a plan is sound, we should be able to stand on the theory that the planned dollars needed for prevention and pre-suppression will result in less dollars for suppression and in damage. It looks like we have to convince ourselves in regard to this before we can convince the public." Is there anyone here who disagrees with this principal? It is a substantial statement, which needs attention and action.

Region 4 made an excellent suggestion. I wish to quote it. - "We don't believe - as an organization - that we should publicly reach out and advertise a desire for more operating funds. On such a delicate subject, we should continue to work thru keymen. If we do a good publicity job and explain the disastrous effects of fire and the resulting damages, we can indirectly inform the general public as to the worthwhileness of an adequately financed organization. Probably we should give more publicity to the fact that when a fire is controlled when small, we save a million dollar watershed. We need to evaluate the specific values of watershed resources and to more closely find out what the disastrous effects of fire are and then use this information in our publicity releases."

The California Forest and Range Experiment Station made a damage survey several years ago which gives the accumulative effect of downstream damage when a watershed in Southern California is destroyed by fire. We have used these figures, probably not to the fullest extent as pointed out by Region 4. We have many, many small fires controlled which threatened watersheds, the values of which go into millions of dollars. More should be done in this field.

Our working capacity will always be limited, thus, we should study every opportunity for new ways to encourage other people and organizations to assist in carrying the educational program.

In California we have a Statewide Fire Prevention Committee with the State Forester as Chairman. Annual meetings are called to lay out and coordinate plans for mass fire prevention effort. Membership is made up of representatives of statewide industrial groups such as logging, lumbering, railroads, power companies, telephone companies, press, radio, television, banking interests, livestock associations, water interests, etc. - the whole gamut of economic

enterprise. Each assume a specific responsibility and carry it out according to the best timing and opportunities available to them. CFFP and Keep Green materials is being distributed to the masses by every means of communication conceivable. The Smokey Bear program is getting results far beyond our wildest expectations a few short years ago. This phase along with intensive project-type of prevention carried on with industrial operators, on the ground, has caused a tremendous effect in the total reduction of man-caused fires in the face of a population increase of more than one thousand every day.

The responsibility for long time conservation education should still rest with the schools. This is a problem before us on a nationwide scale - how to get conservation education into the school system. We should exert uniform pressures, state by state, in order to move faster in this field. The results are particularly important to most of the western regions because of the migration pattern since World War II. We are left with the only alternative, that is trying to catch up with that which was not accomplished in the plains states from which many of the people are coming.

The California Conservation Council is a sort of holding type association made up of representatives from all conservation groups, agencies and educational circles. Over the years the Council has worked with the Department of Education to the extent that conservation education is now a definite part of the regular curriculum in many of the schools throughout the state.

The Western Fairs Association have assumed the responsibility for carrying Fire Prevention as a part of their program, at every County Fair in California. They furnish the space, the money, and the working capacity for fire prevention exhibits. Fire agencies are expected to furnish ideas. There are some startling and worthwhile results to date.

We could go thru the whole gamut of outlet channels for conservation education and fire prevention media, messages, publications, etc. We should continue our work with newspapers, radio stations,magazines and all of the other outlets including the getting of good slides, motion pictures, photographs, etc.

However, in order to keep up with the times, we should take a long and second look at television opportunities. It is an outstanding vehicle for mass education. Seeing something has a much more lasting impression than anything we hear or read. And, since television stations are rapidly expanding outward from the larger centers of population, we should be ready and willing to work closely with them. The fortunate part of it is,they can use a lot of our present working tools - our pictures, our charts of trends, etc.

Television people are interested in timely, public interest subjects. Going fires fall in this category. We have flown technicians with their equipment, 300 miles to a fire. In a matter of a few hours the recording was televised from main stations in San Francisco and Los Angeles. The recent Monrovia Peak-Mount Wilson Fire in Southern California is a classic example of the kind of television coverage we may expect if we make it easy for the companies to get on the job in time. For example: during the first evening of its explosive run, one company went into a hot section and started to televise the action. They were run-out by the fire. From a subsequent safe spot they continued the live broadcast from 11 o'clock at night until 2:30 in the morning. Thousands upon thousands of people were able to view the fire during its most disastrous phase. Subsequent coverage was nationwide. At no time during my years in the Forest Service have I heard so many spontaneous remarks that fire is a tragedy.

Our work, generally speaking, is in the hinterland, way in the back-country, far removed from the public eye. Therefore, it has no sex appeal. The public reads about it, but since it cannot be seen, there is little or no impression left. Now, the situation is completely reversed. Any fire and all of the operations therewith, are brought right into every living room. Frankly, it is the greatest opportunity before us. Fire control people should be alert and capitalize on it. Television people want the news. We want a message put across. It is a natural.

Public education through an adequate fire prevention signing program, can be strengthened materially. Our present black and orange signs are too small for fast traveling cars. The messages on them are to a degree, cold and blunt. They are utterly lacking in sex appeal. On the other hand, there are signs now being used by other fire agencies which are getting results. The California Division of Forestry installs large signs with an absolute minimum of words but heavy with pictorial messages, i.e. a hand crushing a cigarette in an ash tray, two little bears breaking a match, etc. The picture leaves an impression. We should study our whole signing policy and come up with ideas and designs more appropriate to 1954 and what goes on around us. And when we go at this let's work with advertising people in order to get the best results.

The thought which I am about to bring out was not included in my topic. It is quite important, I believe.

It has been my experience, in Region 5, that the job of education, generally speaking, has been contracted to one division, i.e., Information and Education. Further, that other functional program divisions, including Fire Control, and again generally speaking, through this principle have removed themselves

somewhat from the field of general and specific education. Fire control people should be vitally interested in conservation education, and especially fire prevention. Further, you are better equipped with more factual information and can speak intelligently to many people and other organizations interested in fire.

In Region 5, fire prevention leadership now rests in the Division of Fire Control. The Division of I&E helps in setting objectives and in general planning; also assists in measuring results. However, normal planning, organizing, and training rests in Fire Control. I&E still distributes mass media, edits publications, prepares releases, etc. This grouping of like things in like divisions, is paying out.

A whole new look should be made as to how to best organize this Fire Prevention and spread the Public Education Program over the various Regional Office Divisions in order to keep on top of the job.

In summarizing, the following key points are tangible and worthwhile. If people in Fire Control will bring added emphasis to a few items we shall be able to keep abreast in a fast-moving age where we find it more and more difficult to get a parcel of time devoted by many busy people.

1. An educational program for using fire as a tool of land management should not be included in a nationwide program. Rather, more emphasis should be made, region by region, using the best basic information and media which can be developed.
2. Work more with and through local economic groups to develop a greater appreciation for the local public resource values.
3. Use everyday common words instead of stilted and technical terminology.

4. Determine how best to encourage support in fire prevention from the logging and lumbering industry.

5. Urge chief's approval for regional fire plans developed under certain guidelines applicable to all, so that we have coordinated goals to talk of in developing support for an adequate fire control organization.

6. Bring out more strongly the savings in watershed damage through an adequately financed fire organization.

7. Encourage more statewide conservation and industrial associations to help carry conservation education and fire prevention programs.

8. Strive for more uniform results in getting conservation education into the schools.

9. Capitalize on television opportunities.

10. Study and come up with an up-to-date fire prevention signing policy and design.

11. Study and put into effect how best to organize the fire prevention and public education work functional activity by functional activity, at each regional level.

I believe that our opportunities for going ahead are as great as ever before. But, it is going to take a lot of time and effort. Certainly, the field is wide open if we can fully appreciate at least three recent thoughts expressed at the national level. (1) Sherman Adams talk before the Society of American Foresters meeting at Colorado Springs, where he implied the conservation agencies and groups have slipped if they fail to go out after that which is needed to get the job done; (2) President Eisenhower's message to Congress which included significant statements on conservation; and (3) President Eisenhower's Materials Policy Commission report urging stepped-up fire protection and more access roads.